



NESDIS

Quarterly Program Review

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www.osd.noaa.gov



Agenda

- Budget, Performance Measures, and Milestones
- Accomplishments
- Management Issues and Problems
- Diversity/EEO
- Upcoming Events

Budget, Performance Measures and Milestones

Mission

To provide the space and ground segment assets necessary to meet the Nation's requirements for civil operational remote sensing environmental observations

Major Performance Measures

Availability of two suites of critical GOES instruments on-orbit that have the capability of meeting the current user requirements

100%
availability of
critical instruments

Fully accomplished 

Availability of critical POES Instruments on-orbit that have the capability of meeting the current user requirements

97% availability of
critical instruments

Fully Accomplished 

Major 3rd Quarter Milestones

Status

Satellite Systems

Launch NOAA-M

Complete

Deliver AVHRR for Metop-1


Complete

World Class Workforce

Establish IDP for interested employees

Complete

Other Milestones

Sign NOAA/NASA/Navy MOA for GIFTS/ IOMI (Establish GIFTS/ABS agreement (w/NASA))	Complete
Deliver Space Env. Monitor Flight Model 1 (for GOES-N)	Complete
Complete Agency level req. docs. for ocean, land, atmosphere, cryosphere, and space satellite obs.	Draft CORL target Oct. '02
Deliver SN10 Imager	Complete
Start GOES-N Spacecraft Environmental Testing 	Complete
Complete GOES-O Spacecraft Payload Module Test	Resked to Sept.'02



GOES

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NESDIS Quarterly Review-3rd Quarter/2002





GOES Launch Schedule

Satellite	Need Date	Planning launch Date
GOES-N	Jan 2004	Apr 2004
GOES-O	Apr 2005	Apr 2007
GOES-P*	Apr 2007	Oct 2008
GOES-R	Apr 2012	Apr 2012

Accomplishments

- GOES

- GOES-N Series

- The GOES-N S/C completed Dynamic Interaction Testing 
 - The GOES-N (S/N08) Imager and Sounder mechanically/electrically integrated onto the GOES-N bus 
 - Electrical Performance Testing is complete.
 - The GOES-N SEM (XRS, EPS, and HEPAD instruments) successfully completed environmental testing at Panametrics and shipped to Boeing.
 - GOES-O Bus Module completed.
 - GOES-O payload module communication testing completed
 - The GOES-O (S/N09) Imager and Sounder remain in storage at BSS awaiting integration.
 - The GOES-O FM1 EPS/HEPAD are in unit level integration and testing
 - SXI FM2 is undergoing T/V testing with delivery to BSS planned for September 2002.

Accomplishments (Cont.)

- GOES (Cont.)
 - GOES-R Spacecraft
 - Alternate constellation architectures identified and cost/trade studies underway
 - NOAA/NASA GOES-R group leads are working with the Goddard Integrated Mission Design Center (IMDC)
 - Advanced Baseline Imager
 - The final/draft PORD and IRD released to the ABI contractors.
 - Delta-Mid-Term reviews are scheduled for late August and early September 2002.
 - After the delta Mid-Term Review, requirements will be finalized and preliminary design commences.
 - Advanced Baseline Sounder
 - NASA Headquarters authorized the GIFTS mission to proceed to the Critical Design Review milestone.
 - NOAA/NASA/NAVY GIFTS MOA signed



POES

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NESDIS Quarterly Review-3rd Quarter/2002



POES LAUNCH SCHEDULE

as of August 2002


Satellite	Likely Orbit	Available Date	Need Date	Planning launch Date
NOAA-N	PM	June 03	-----	June 2004
Metop-1	AM	April 04* +	-----	Jul – Dec 2005
NOAA-N'	PM	June 05	Jun 04	March 2008
Metop-2	AM	April 05*	(Dec 06)	Jan – Jun 2010

*Satellite storage dates

+Metop-1 will not have a IASI at this time

Accomplishments

- POES

- Successfully launched NOAA-M(17) 
- NOAA-17 On-orbit Verification complete (Over 120 on-line tests)
- Delivered the Metop-1 AVHRR (S/N A307)
- Continued negotiations with EUMETSAT on Joint Transition Activity agreement
- Arranged discussions between EUMETSAT and US Instrument vendors on Metop-3 support, August 14-16.
- Integrated and tested MHS instruments on NOAA-N and N'



Accomplishments (Cont.)

- POES (Cont.)

- NOAA-N environmental testing will start in September– goes to storage in December 2002
- NOAA-N' integrated, initial electrical testing complete – goes to storage in September 2003
- Metop – See table for status of delivery of instruments to Europe
- Completed review of projects for FY 2003 Product System Development and Implementation (PSDI) funds
- Began process to develop a 5-Year Polar Product Plan



METOP ACTIVITY

Instrument Status

	Metop EM	Metop-1	Metop-2
AVHRR (3)	Delivered	Delivered	Mar 2003
HIRS (2)	Delivered-EM	Delivered	Sep 2002
AMSU (3)	Delivered	Delivered	From Metop EM
SEM (3)	Delivered-EM	Delivered	Delivered
SARR (2) (From Canada)	Delivered	Delivered	From Metop EM
SARP (3) (From France)	Delivered-EM	Delivered	Sep 2002



Requirements, Planning, and Systems Integration

Accomplishments

- Requirements, Planning and Systems Integration
 - Requirements
 - Formed GOES-R Operational Requirements Working Group to develop next version of GORD
 - Participated in Space Weather Week (Apr 02), Boulder CO
 - Planning continues for GOES-R Users Conference, Boulder, CO, October 1-3, 2002
 - Includes panels on oceanography, Marine transportation, & Fisheries.
 - Planning September meeting in Boulder to validate customer requirements for Extreme Ultraviolet, Solar Wind, and Energetic Particle products
 - Support planning for Direct Readout Users Conference, Miami, Dec 9-12

Accomplishments (Cont)

- Requirements, Planning and Systems Int. (Cont)
 - Advanced Technology Exploration & Infusion
 - Data compression techniques - formed expert team to address very high data rates expected in GOES-R era sounder data. To date, achieved lossless compression near a factor of 3.3 compared to 1.3 expected. This is a notable achievement.
 - Satellites and National Imperatives Initiative – Health:
 - Held Weather and Infectious Diseases Seminar Apr 02, with Dr. Jim Wilson, M.D. (used NDVI to study spread of encephalitis in Columbia – 1995). Briefing to Mr. Withee planned for September
 - Participated in successful Solar Sail Boom deployment Test
 - Participated in International IEEE Data Compression Conference



Accomplishments (Cont)

- Requirements, Planning and Systems Int. (Cont)
 - GOES-R Planning
 - Formed weekly GOES-R Coordination Board (NOAA-NASA)
 - Studying a number of instrument and satellite configurations
 - Developed candidate Instrument suites – simple, moderately complex, very complex
 - Examining engineering, system, and cost variability using NASA/GSFC's Integrated Mission Design Center (IMDC) and Instrument Synthesis & Analysis Laboratory (ISAL)
 - Cost Benefits studies continue in phase II (Mitre Corp)
 - Initiated GOES-R architecture development using Aerospace Corp method
 - Exploring small sats, big sats, MEO orbits
 - Developed GOES-R Concept of Operations
 - Met with DISA to coordinate frequency spectrum for GOES-R
 - Presented to GOES-R coordinating board, spacecraft communications technology assessments done by Aerospace Corp under division tasking (June 5, 2002)
 - Completed 2 yr study with presentation showing cost rationale for distributing high resolution GOES-R data by satellite instead of by dedicated land lines (June 28, 2002)



Accomplishments (Cont.)

- Requirements, Planning and Systems Int. (Cont)
 - Other accomplishments
 - National Academy of Sciences (NAS) Transition study - Completed last of 3 public meetings, report due May 2003
 - Second NAS study initiated (with NASA funding) on Data Utilization (NASA funded), board members being selected
 - Developed initial NESDIS CONOPS, briefed SES retreat
 - Presented invited paper on Future GOES to WMO RA-IV Hurricane Conference
 - Supported International H₂O Project (IHOP)
 - Sponsored educational display on Weather and Infectious Diseases to Hill Staffers (Jun 12)
 - Led a NOAA, Navy, MIT/LL assessment of EO-1 Hyperion and Advanced Land Imager to meet NOAA's coastal remote sensing requirements



Ground Systems



Accomplishments

- **Ground Systems**

- FY02 PAC Budget/Spend Plan being Executed as Planned
- FY03 PAC Budget/Spend Plan w/FY04-08 Budget Plan Complete
 - Plan briefed to the NESDIS ITAT May 21-23
 - Plan to be briefed to the NEB in September 2002
- IT Security/Business Continuity Planning
 - Supporting GISRA Submissions for OSO Systems
 - Plans of Action and Milestones prepared for resolution of identified weaknesses
 - Supporting NTS-2000 (NOAA Total Security 2000) Activities
 - Performing BIA (Business Impact Analysis) and COOP (Contingency Operating Plan) preparation toward a complete Disaster Recover Plan (DRP) for OSO
 - OSDPD and Data Center BIA/COOP and DRP are in the future



Accomplishments (Cont.)

- **Ground Systems (cont.)**

- GOES Replacement Product Monitor (RPM)
 - Complete -- Placed in Operation June 2002
 - Operational for 11-weeks with no significant problems
 - Old PMs have been removed from service
- Consolidated Workstation (CWS)
 - Parallel Ops Testing (POT) of the GOES portion resumed in May
 - Archive Browser/Extractor (ABE) analysis tool under aggressive evaluation by SOCC engineering staff
 - Operator/User Training began August 5, and will run for 3 months
- Secure Remote Access System (SRAS)
 - CDR Completed May 8, 2002
 - SDCI (Spacecraft Data Collector Interface) to be completed in August 2002
 - Serves data to SRAS from GIMTACS, PACS, and IPACS Systems
 - PKI (Public Key Infrastructure) Server development in-process
 - SRAS completion scheduled for February 2003



Accomplishments (Cont.)

- **Ground Systems (Cont.)**

- GOES (Telemetry) Archive System (GAS)
 - All Priority-1 and -2 anomalies resolved and successfully tested
 - Parallel Operations Test (POT) is Underway
- GOES-N Series Spacecraft Support Ground System (SSGS)
 - End-to-End Test-#1 with GOES-N completed in May 2002
 - ETET-#2 (N) scheduled for 03-06 September 2002
 - ETET-#1 (O) scheduled for 14 October 2002
 - Build-#5 Software Release (of 6) delivered by BSS in June 2002
 - Build-#5a “patch” undergoing pre-release testing
 - Intermittent EPOCH COTS failures continue to be a nuisance
- DCS Automated Processing System (DAPS)
 - Front-end Demodulator replacement continues to be a major availability problem due to ‘niche’ nature of the industry
 - Core DAPS will be ready for Pre-shipment Testing at ISI in October 2002



Accomplishments (Cont.)

- **Ground Systems (Cont.)**

- SOCC Expansion/Relocation

- Computer Room move activity Complete August 2002
 - Last components moved August 5
 - Test/Development and SSGS Transition Area being established in the “old” SOCC
 - Visitor Cubicles installed for Contractors supporting post-delivery systems integration activities, and for the N-series Launch Team
 - Security Desk installed for access control to “new” Operations Areas at the mid-Wing stairway

- FCDAS

- An Offer has been made to the Owners’ Group for the 600-acre In-Valley Tract at the appraised value
 - U.S. Army/COE is awaiting a reply
 - Phase-II of the road resurfacing is Complete
 - Conduit in-place for security lighting and cameras along entrance road, and at current and future gate locations


Accomplishments (Cont.)

- Ground Systems (Cont.)

- NSOF

- 60% Detailed Design Package (DDP) received from the A&E
 - Reviewed and Comments Returned in June 2002
 - 95% DDP due August 24, 2002
 - Final Design (Ready for Construction) Due Sept. 20, 2002

- GMS-5 Contingency Backup for JMA

- JMA Funding received May 20, 2002
 - Contract Awarded May 24, 2002 to ISI (\$4.9M)
 - Antenna and Systems Integration
 - Funding Sent to U.S. Army CoE May 31, 2002 (\$600K)
 - Antenna Foundation and Site work 
 - Aggressive Schedule: some systems availabilities have changed since initial JMA discussions in October 2001!
 - Antenna Accommodations to achieve earliest possible availability of GOES-9 to JMA are being reviewed
 - CDR Completed August 6-7, 2002
 - Long-pole is delivery of two gear assemblies (from Japan!!)



Accomplishments (Cont.)



- Ground Systems (Cont.)
 - Climate Reference Network (CRN)
 - OSD working with NCDC to establish a CRN Acquisition Project
 - Roles and Responsibilities have been defined
 - NCDC very receptive to OSD support
 - Announcement will be made to NCDC Staff – August 19, 2002
 - Announcement will be made to the Regional Climate Centers - August 20, 2002
 - OSD-NCDC Team Building at NCDC – September 5, 2002
 - SOCC Automation
 - FY 03 and FY 04 initiatives not successful
 - \$2M/\$2M Studies and Design
 - \$8M/\$8M/\$8M Implementation
 - Reprioritization of 5-Year Plan may be required



Special Projects

Accomplishments

- Special Projects

- Global Wind Demonstration 
 - Conducted tour of GroundWinds-HI for VADM Lautenbacher 
 - Received personal note of thanks, *“It is always good to see NOAA staff excited about their work and pushing into areas of new scientific capability”*
 - Conducted 12th Quarterly Review in Bartlett, NH
 - Demonstrated Operation of GroundWinds-New Hampshire - 2
 - » Instrument supported AIRMAP campaign in July
 - Jim Yoe, ORA, presented Validation Campaign (Sept 2000) paper for final review and submission for publication this summer
 - Participated in NASA/NOAA Lidar Winds Working Group
 - Chaired by Wayman Baker, NCEP
 - NASA/NOAA breakout session panel agreed to develop a wind lidar technology development plan for NASA and NOAA signature by December 2002



Radio Frequency Management

Accomplishments

- Radio Frequency Management
 - UWB
 - Continued oversight of NOAA efforts to minimize damage from proposed Ultra-wideband systems
 - Coordinated agreement between NOAA and EUMETSAT's radio frequency management office
 - WMO
 - Prepared position and information papers on frequency issues for US delegation to EC-LIV
 - Represented WMO at meeting of the Asian Pacific Telecommunity to promote support for meteorological concerns

Accomplishments (Cont)

- Radio Frequency Management
 - NTIA Spectrum Planning Subcommittee
 - Sage 1 (conceptual) approved for GOES R-U
 - Stage 3 (developmental) approved for GOES I-M at 155E
 - Stage 4 (operational) support for the next NWS weather radar
 - Stage 4 support for NWS Radiosonde receiver (ground station)
 - Magazine Interview
 - R Barth interviewed by *Technology Review* (MIT) on NOAA's concerns about UWB





Management Issues and Problems

- FB4 HVAC of continuing concern
- Reorganization Approval

Diversity/EEO

- Completed all SFA Workgroup Meetings
- Implemented Interim Telework Policy
- Mike Mignogno serving on NOAA Diversity Council Mentoring Subcommittee
- Angela Ferguson participating in DOC Mentoring Program
- Don Nortrup facilitated 13 SFA Workgroup Mtgs

NESDIS Survey Feedback Action Tracking

Office	Number of Workgroups	Meetings Held	Meetings Scheduled	Action Plans Entered	Number of Actions	Number of Actions Elevated
Headquarters Staff						
Office of the Chief Financial Officer						
Office of the Chief Information Officer						
International and Interagency Affairs						
Satellite Operations						
Satellite Data Processing & Distribution						
Research & Applications						
Systems Development	5 (8)	5	0	4	19	9
Integrated Program Office						
National Climatic Data Center						
National Geophysical Data Center						
National Oceanographic Data Center						

Upcoming Activities

- NOAA PMI Tour of LM, August 20, Sunnyvale
- EUMETSAT Data Users Conf., August 31-September 7, Dublin
- JTA Data Denial Meeting, September 23, Darmstadt
- GOES User Conference, October 1-3, Boulder
- Direct Readout Users Conference, December 9 - 12, Miami



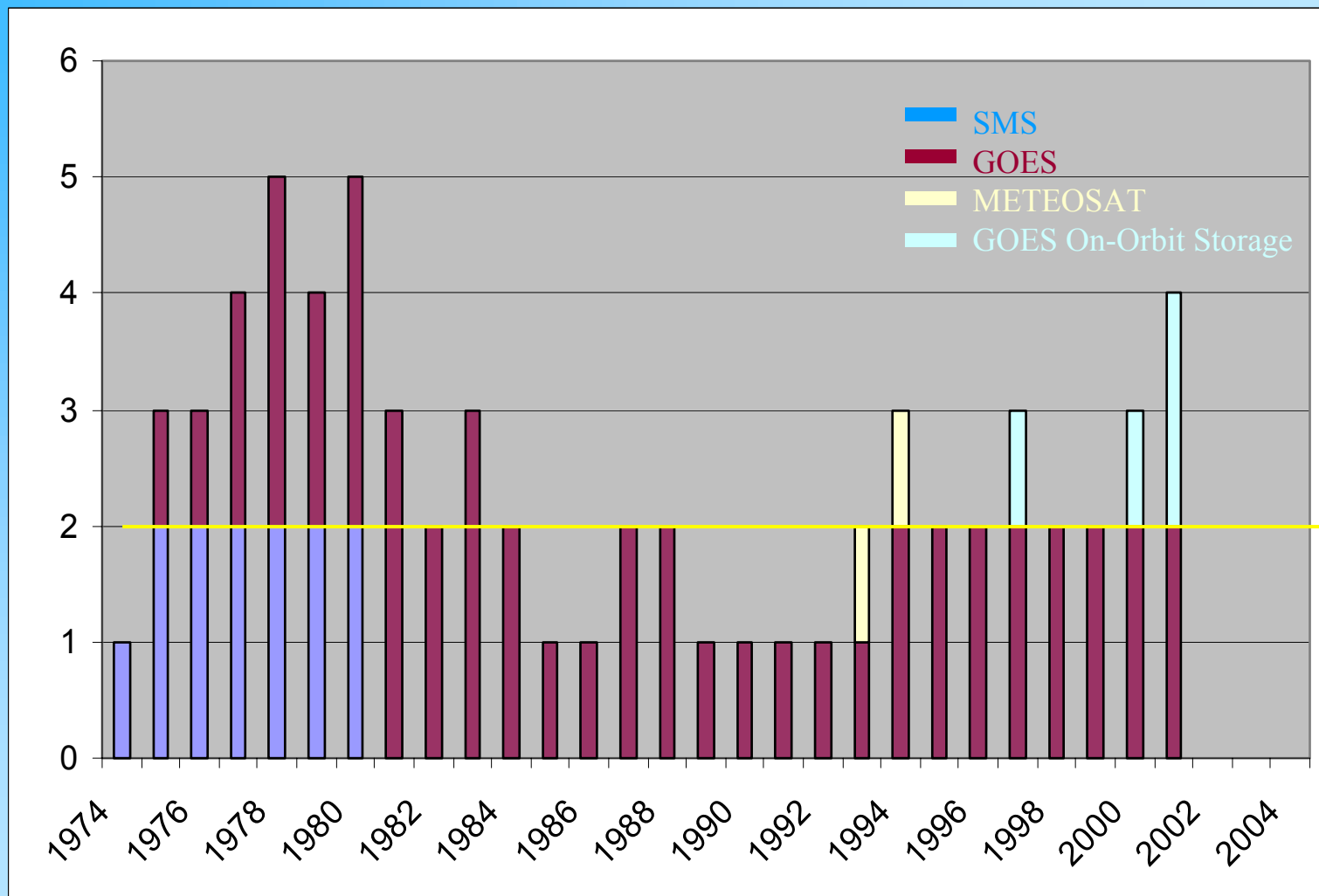
Clean-Up Day – May 9, 2002





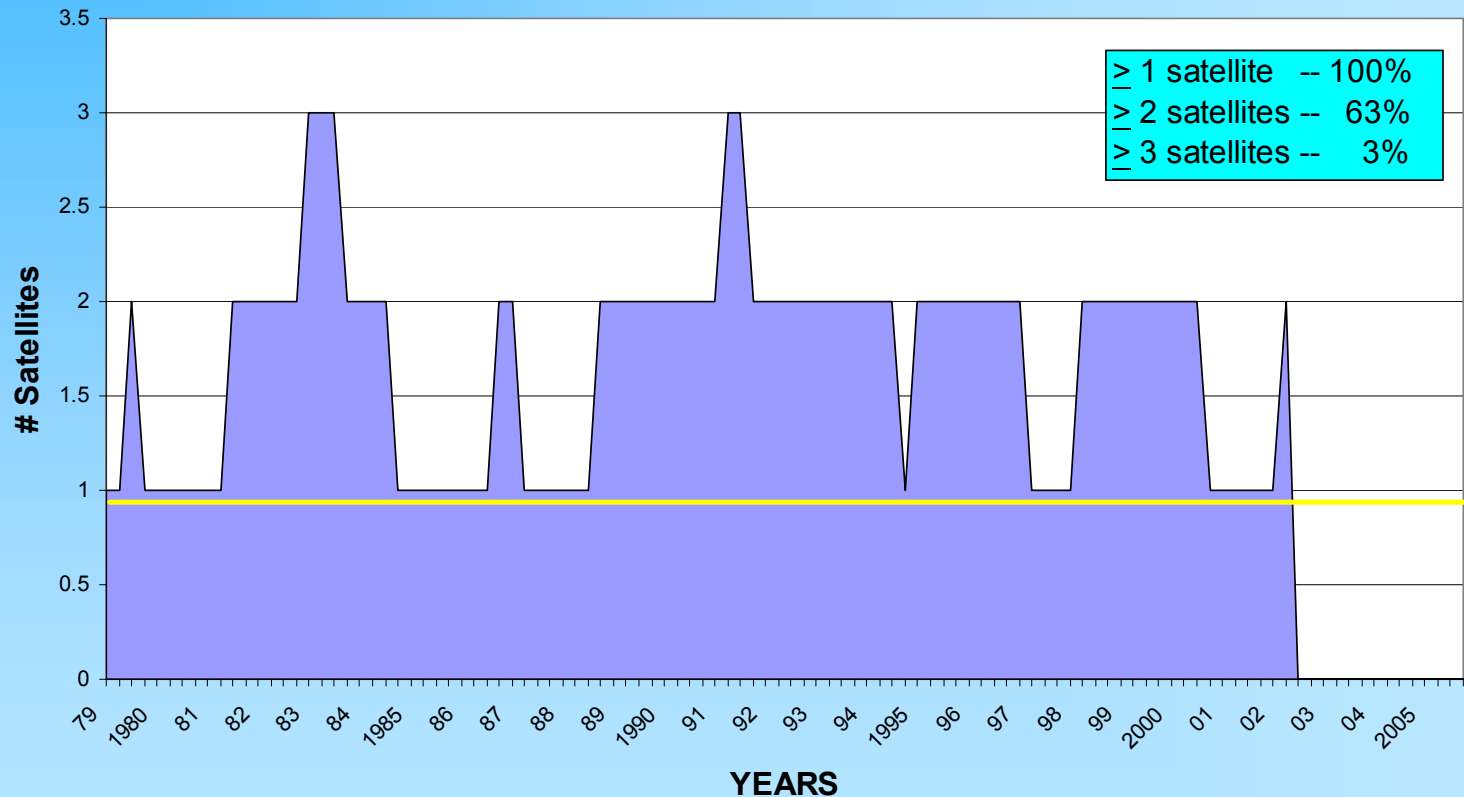
BACKUP

GOES Operable Satellites



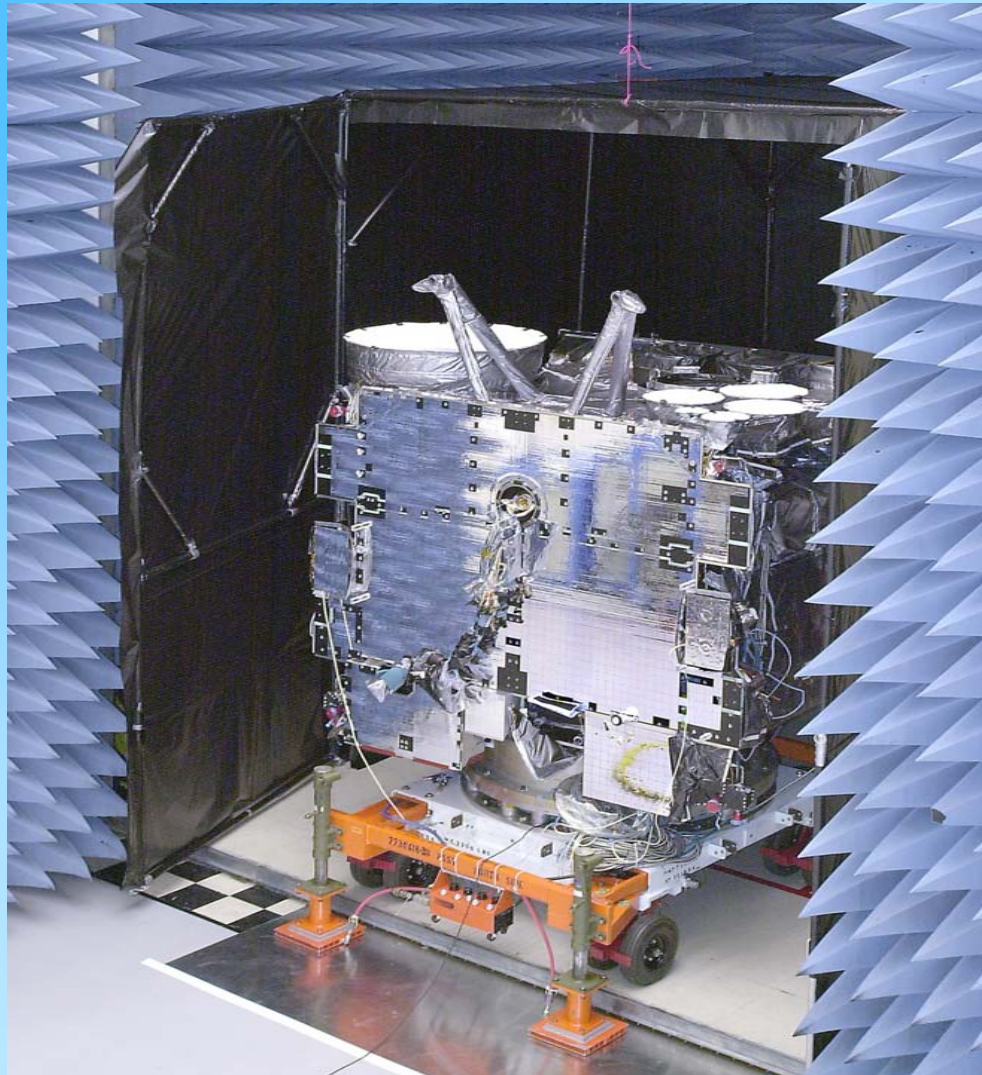
Note: Shown is the number of operable GOES satellites in orbit at end of year shown (end of 1975 = 1 , end of 2001 = 4)

POES Operational Satellite Availability 1979 thru 2002





GOES-N in Anechoic Chamber

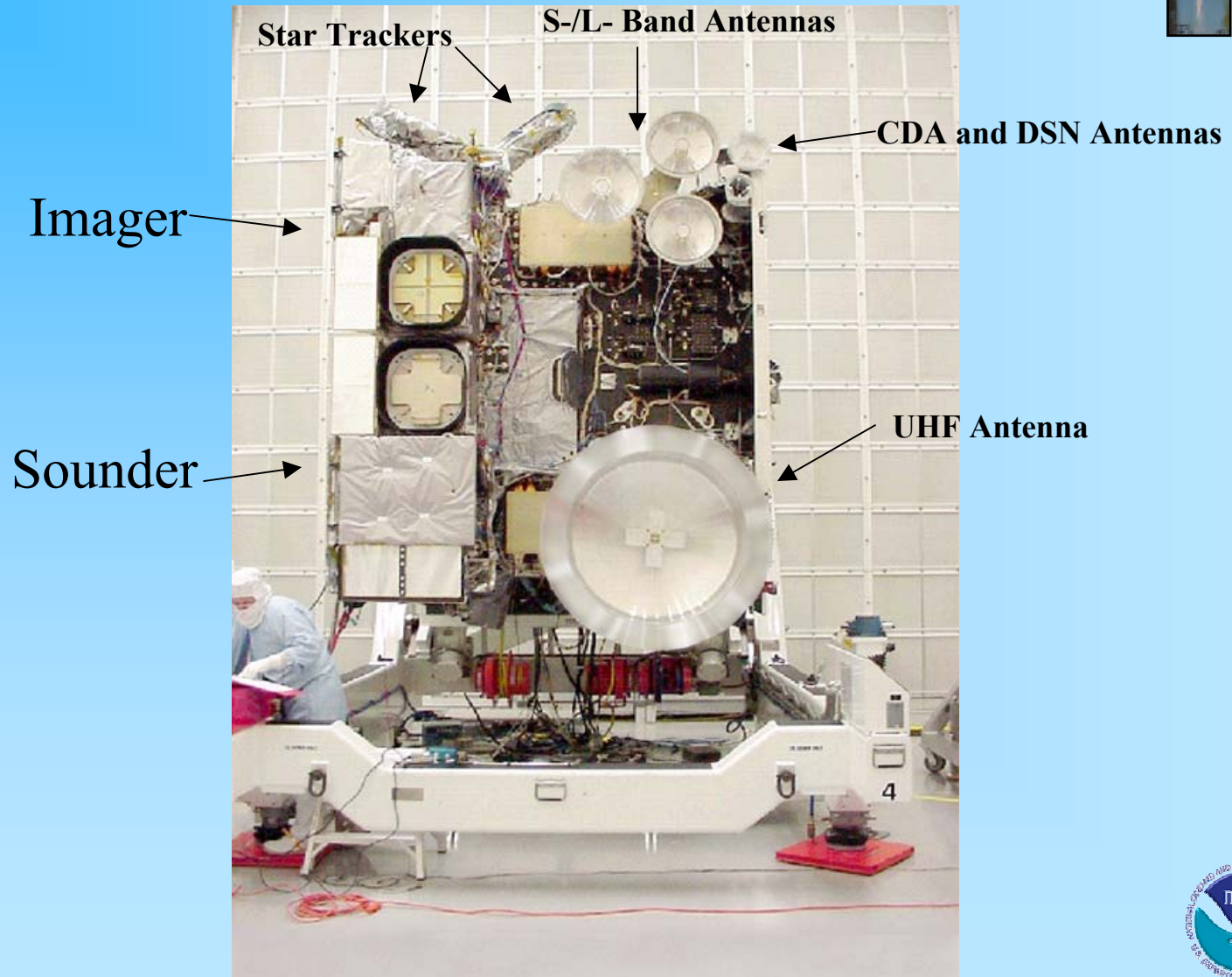


GOES N Spacecraft in Dynamic Interaction Test

6/6/02



GOES-N (S/N08)



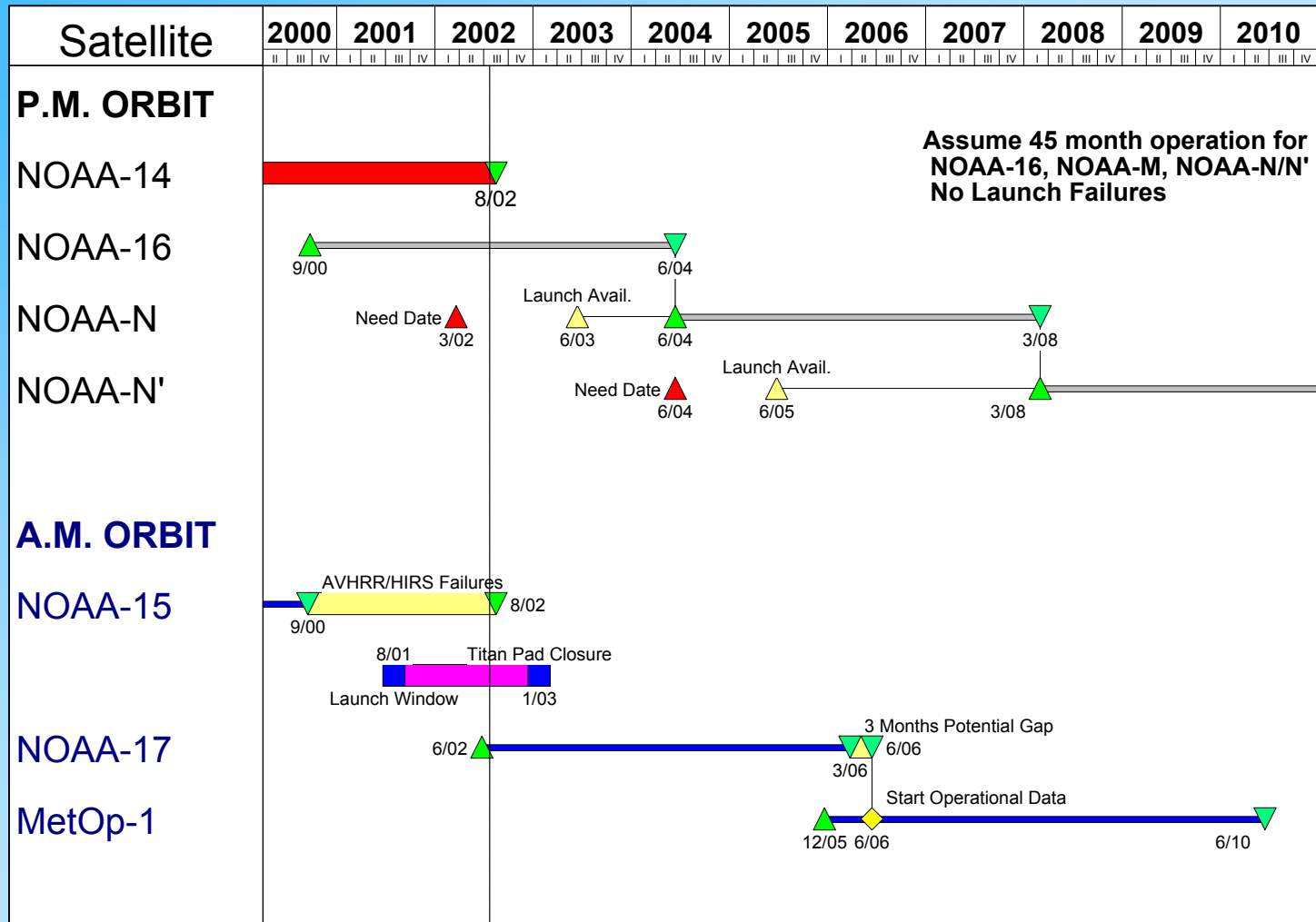
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POES Planned System Coverage

7/23/02



NOAA-17 Launch

June 24, 2002,
18:23 GMT

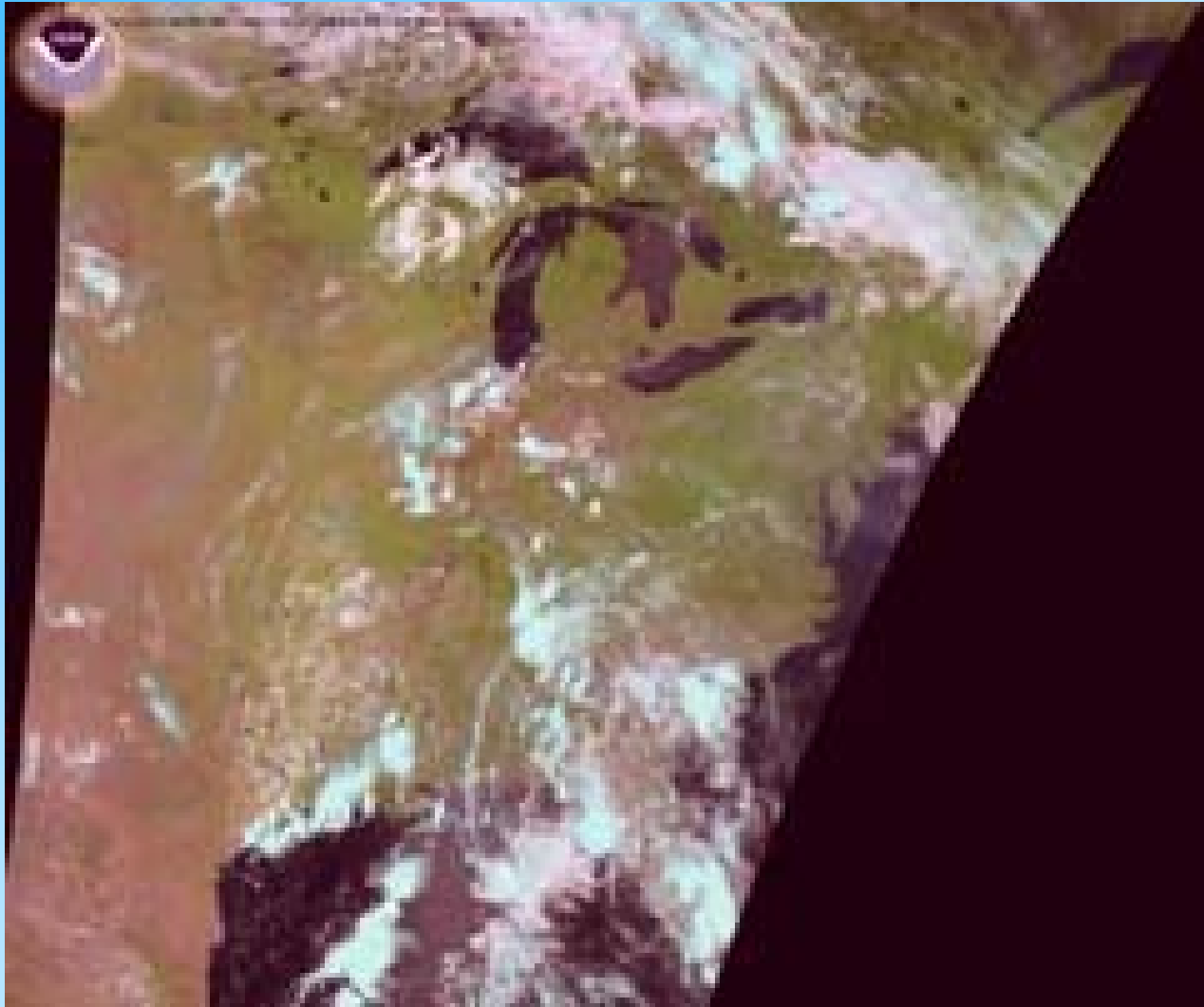


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NOAA-17 Image June 24, 2002

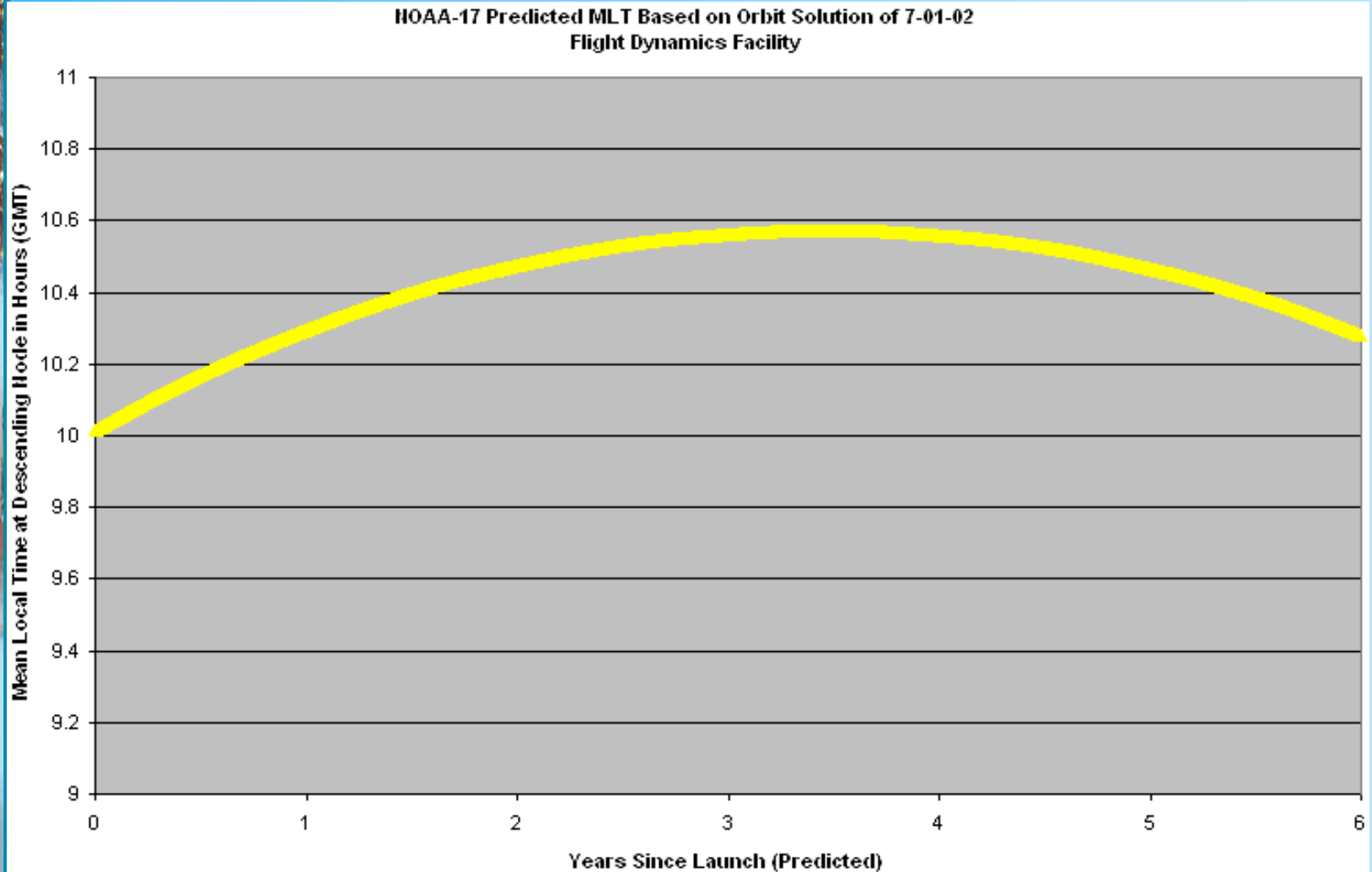


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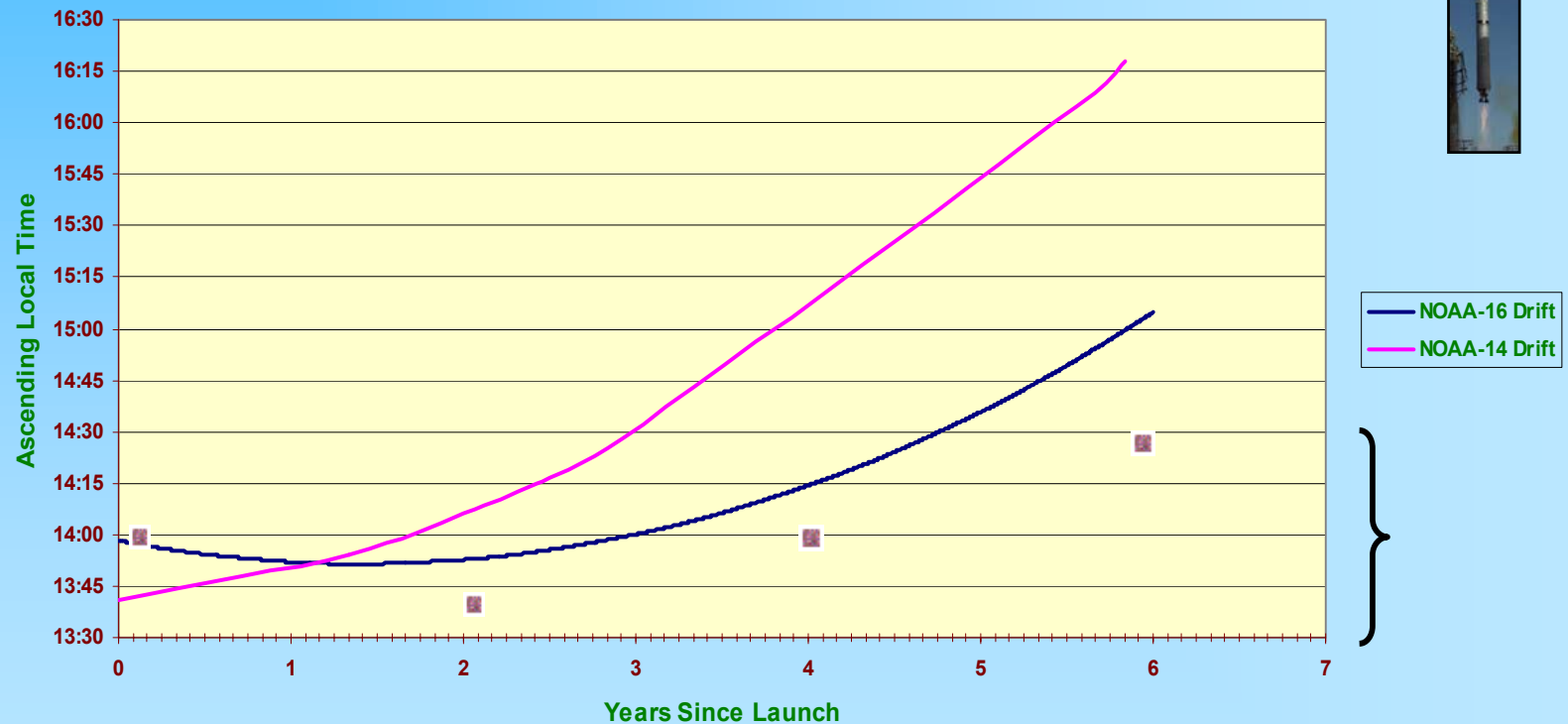


NOAA-17 Orbit Drift Prediction





Satellite Drift: NOAA-14 vs NOAA-16





FCDAS Dump Truck



21-meter Antenna Foundation
for GMS Support at FCDAS
(33'x33'x6')





GroundWinds

Atmospheric Wind Lidar

GroundWinds Data Collection

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Data Archives

Search for data by date (month/day/year):

OR

Browse data archives in the folders below:

[Instrument](#) [Year](#) [Month](#) [Day](#) [Time](#)

- GroundWinds Hawaii

- 2002

- May

- 11

- [00:31.20](#)

- [07:18.25](#)

- 29

- [06:10.03](#)

- [07:47.14](#)

- [09:11.50](#)

- 30

- [09:28.15](#)

- GroundWinds New Hampshire

- 2002

- July

- 20

- [07:30.46](#)

Data Products

GroundWinds Hawaii



GroundWinds New Hampshire



<http://www.groundwinds.com>

GROUND WINDS HAWAII VISIT

